

Philips and Microbiome

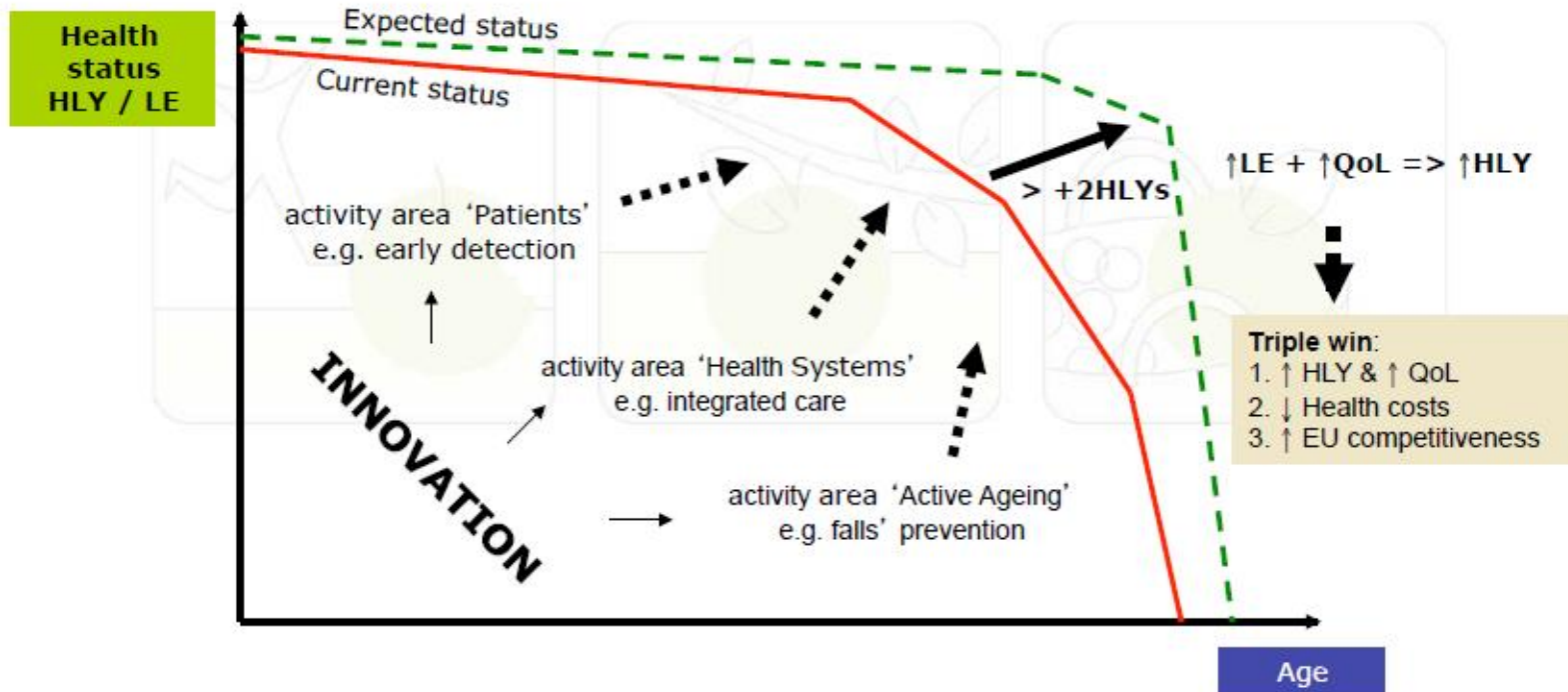
H2020: Not NIH nor DARPA nor MRC (UK)

Keith Baker

Philips

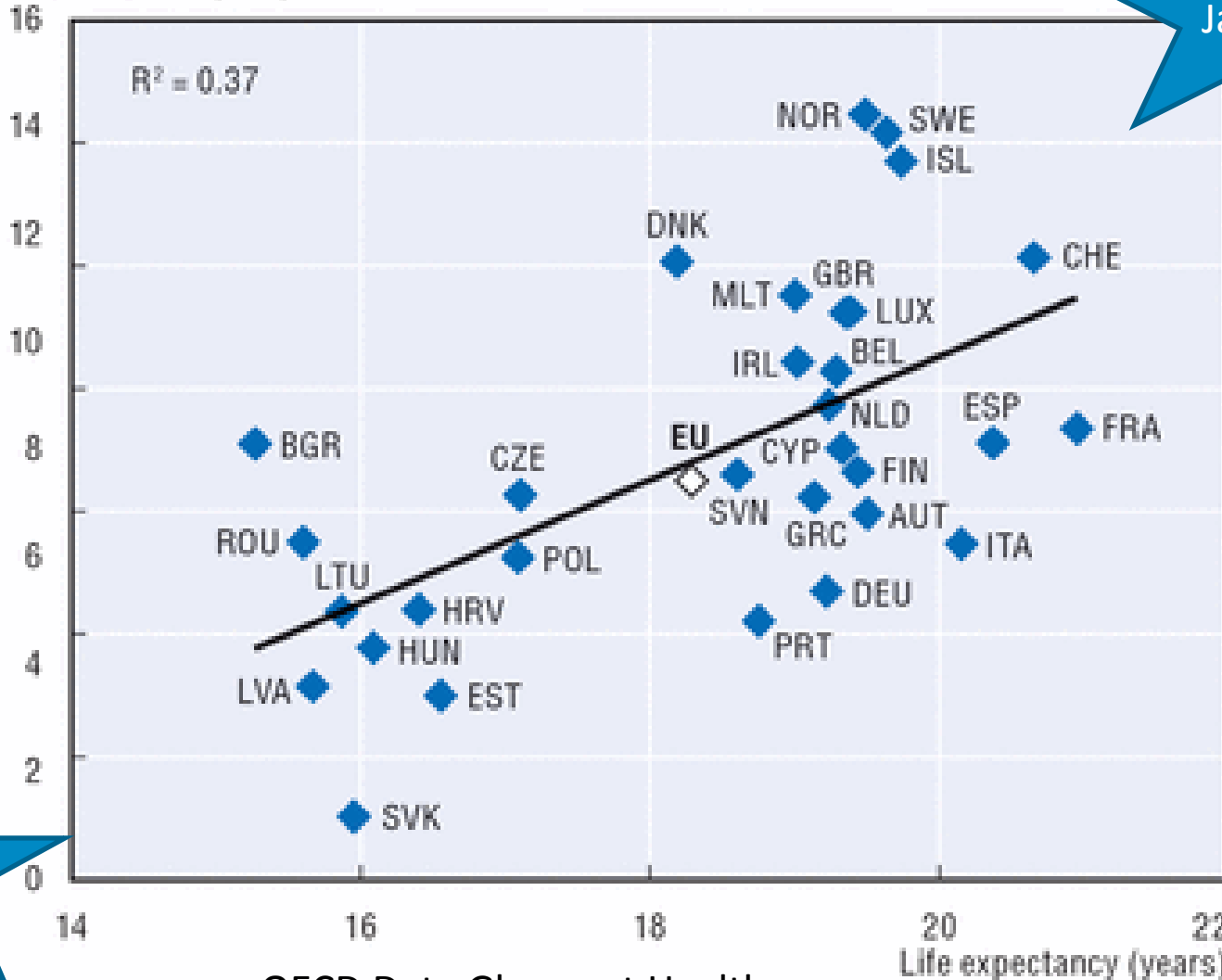
Feb. 23th , 2016

Innovation for HLY+2 and 'triple win for Europe'



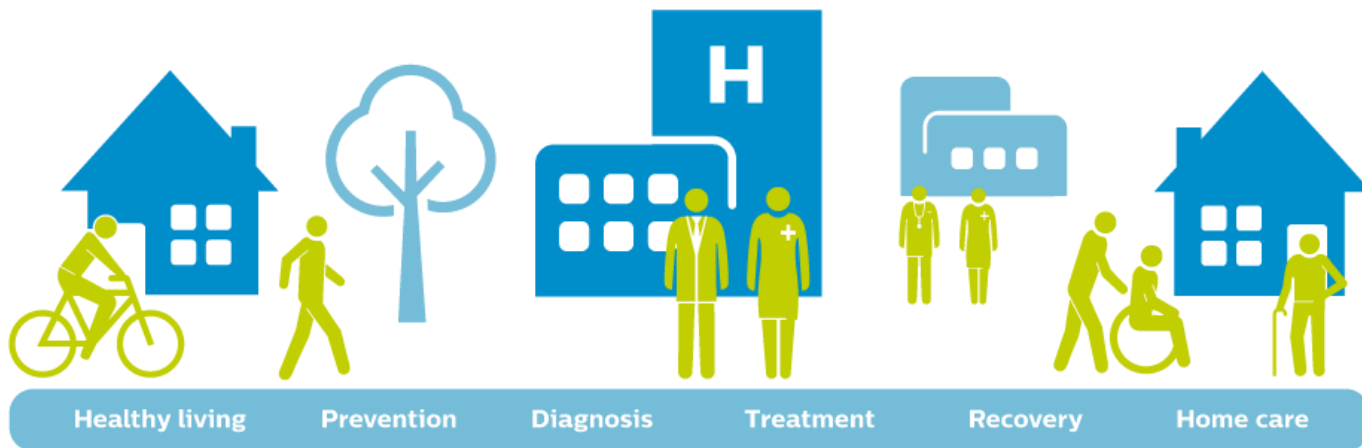
Cost to the EU of Aging: Chronic Disease Burden at 65 years old

Healthy life years (HLY)

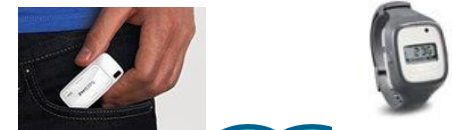


Philips Lifestyle View

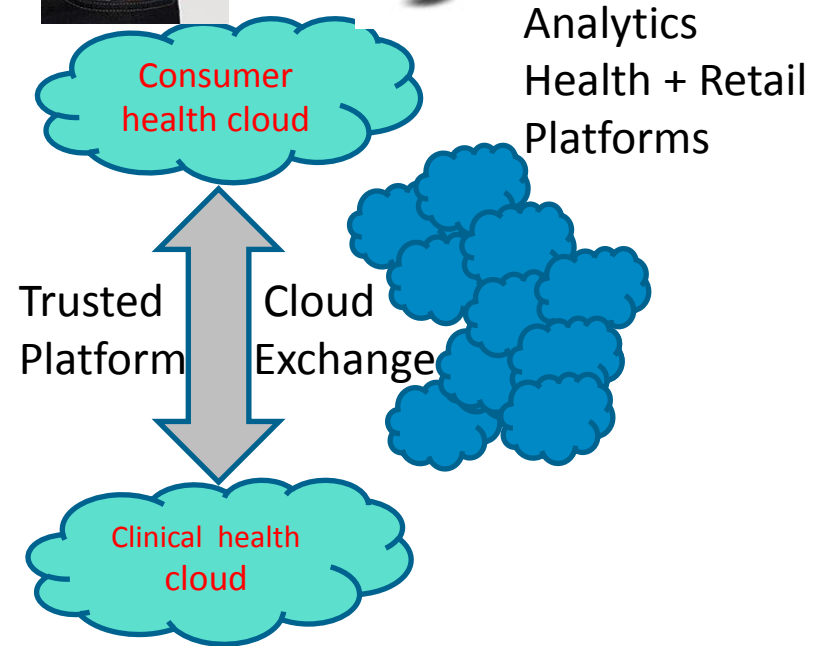
- Philips is a major healthcare company
 - CVD, cancer and respiratory diagnosis and treatment
 - Mother and child care: neonates (Breast feeding)
- Philips is a major consumer health company
 - Personal care, hygiene & personal health via exercise-diet
 - Nutrition for old and infant



Clouds Platforms for Health Care Suite Platform for IoT

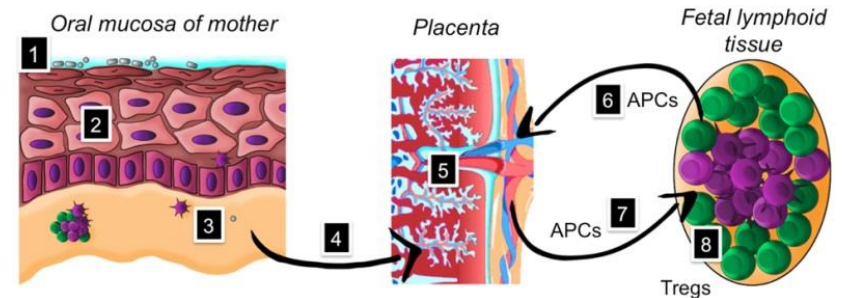
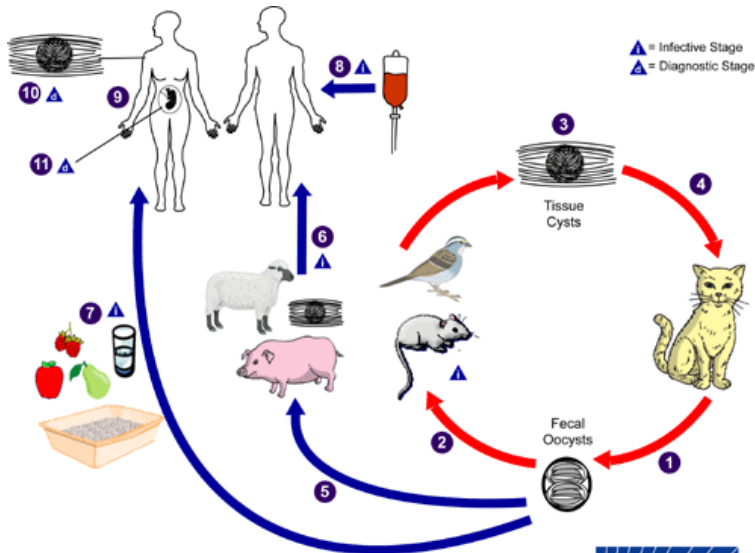
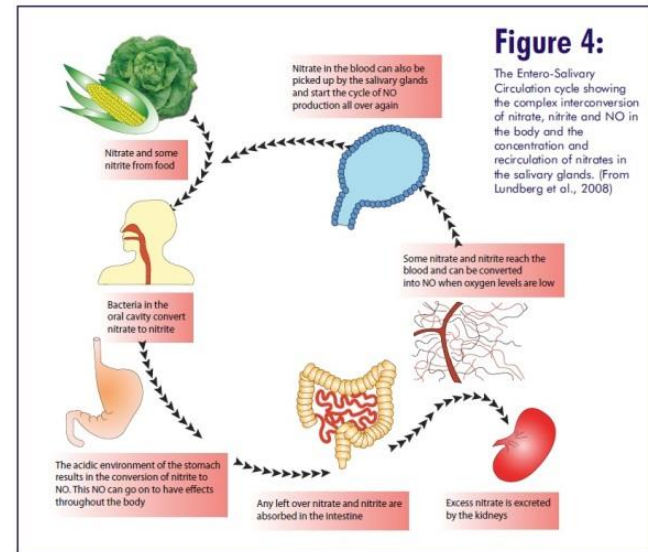


Hyperconnectivity and Marketing



Pharmacodynamics: Device-Service: Dynamics & Kinetics

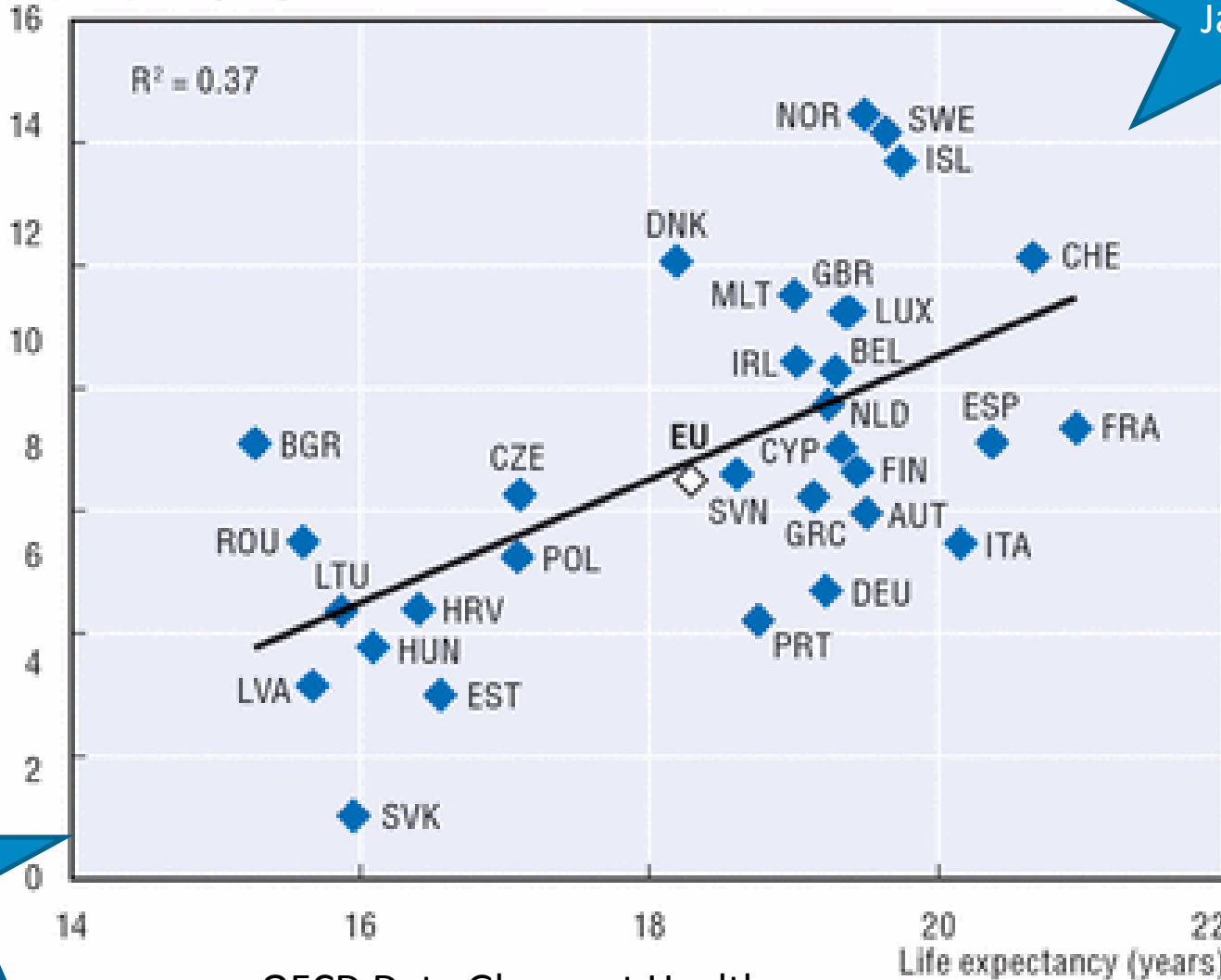
Potential Applications areas



- 1 – Oral microbiome of mother; microbial cells attach to the oral epithelium
- 2 – Loosening of epithelial cell contacts due to pregnancy hormones; oral bacterial penetration
- 3 – Bacterial cells reach lamina propria and vascular tissues of the oral mucosa
- 4 – Transfer of bacterial cells to the placenta via blood stream
- 5 – Oral bacteria of mother are trapped in placental tissue
- 6 – Fetal Antigen Presenting Cells (APCs) acquire the alloantigen information in placenta
- 7 – Fetal APCs return to fetal peripheral lymphoid organs
- 8 – Fetal regulatory T cells (Tregs) that recognize mother's microbiome as "safe" are generated in fetal lymphoid tissue

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Healthy life years (HLY)



Metabolic laws

Japan

Poor people

